



## The Forgotten Disaster: Outstanding Issues Arising from the Tumbi Landslide

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## Executive Summary

On 24 January 2012, a landslide in the Southern Highlands of Papua New Guinea (PNG) buried the villages of Tumbi and Tumbiago. Approximately twenty five people were killed, although no official death toll exists. In the landslide's aftermath, local landowners, village leaders, victim's families, officers from the National Disaster Center, and international landslide experts, raised concerns over the role played by a local limestone quarry which serviced ExxonMobil's Liquefied Natural Gas (LNG) project. When an arms-length inquiry into the disaster failed to materialize, local landowners disrupted efforts to clear a road essential to ExxonMobil's construction work. With officers from the Royal Papua New Guinea Mobile Squads and the Papua New Guinea Defence Force on site, protesting landowners were allegedly threatened, and then offered cash incentives, to remove the blockade. The blockade was lifted, and construction work resumed. To date no inquiry has been held into the cause of the landslide – despite promises by senior members of Cabinet– while the displaced have been forced to live in tents in close proximity to the landslide site. This report demands that a Commission of Inquiry investigate a) the cause of the landslide; b) government oversight of safety at the LNG project; c) the response of the NDC to the landslide; and d) allegations of impropriety and collusion on the part of ExxonMobil via their subsidiary Esso Highlands Limited.





## Introduction

At approximately 6am on 24 January 2012 a landslide deposited around 3 million cubic metres of debris on top of the villages of Tumbi and Tumbiago, in the Southern Highlands of Papua New Guinea (NDC 2012). While there remains no official death toll, PNG Red Cross has estimated that up to 60 people were killed (Wilson 2012).

One of the few reporters who travelled to the affected area in the landslide's immediate aftermath witnessed a scene of devastation:



The sound of wailing fills the air around the legendary Gigira mountain in Tari as mothers openly shed tears as they go about trying to locate their loved ones in one of the worst landslides ever recorded in Papua New Guinea. Clad in mud and weeping and wailing, the mothers are joined by other villagers, lucky to be spared by the tonnes of mud, huge limestone slabs and debris that came down suddenly on the sleeping village at the foot of the mountain. (Alphonse 2012)



Facing a hazard of unprecedented magnitude, the traditional landowners of Tumbi and Tumbiago blamed the landslide on a local limestone quarry leased by ExxonMobil subsidiary Esso Highlands Limited (EHL). They claimed the quarry work had profoundly destabilized the area's geology/waterways (Alphonse 2012; Fox 2012). As Timothy Nogobe – a local resident – explains, “we have been living on this land for the past 6000 years this is the first time our mountain has killed us” (quoted in LNG Watch 2012).



Yogoyo Piwago, a resident of Tumbi who lost 12 family members in the landslide, articulates the substance of the landowners' position:

ExxonMobil [via EHL] has narrowed and blocked the Tumbi [river] water flow by putting in culverts and also they filled in huge stones for their work on the Tumbi quarry mountain. They even used chemicals at the headwaters of Tumbi and blasts for the quarry. This combination of factors of water blockage and the quarry has caused the huge landslides that buried my 12 family members, in addition to 15 pigs, 8 houses, gardens and properties. (Piwago 2012)

The landowners' concerns were shared by officials from Papua New Guinea's National Disaster Center (NDC). The NDC's Bill Yomba told CNN on 25 January 2012: "We are still trying to find out the cause but at this stage we believe the gas project run by Esso Highlands Limited was a contributor because they had been digging for limestone in the area" (Belcher 2012).

According to EHL documentation, the quarry at the centre of the above allegations was being used for construction work at their large Liquefied Natural Gas project (PNG LNG), which is expected to begin production in 2014 (PNG LNG is one of the largest resource developments in Papua New Guinea's history - in a report prepared for ExxonMobil by ACIL Tasman (2008), it is suggested that the PNG LNG project will double Papua New Guinea's Gross Domestic Product). EHL observe:

Esso Highlands Limited (Company) proposes to develop the Papua New Guinea (PNG) Liquefied Natural Gas (LNG) Project (Project) to commercialize the gas reserves within the Southern Highlands and Western Provinces of PNG. Tumbi Quarry, known as QA1, is required for aggregate to be used by the Project in the Komo area. The Project will be leasing the quarry from Hides Gas Development Corporation (HGDC) for an estimated two year period, depending on aggregate requirements of the Project, after which the quarry will be returned to HGDC" (EHL 2010).

### **Investigating Landowner Allegations: The Official Response**

The NDC is responsible for responding to, and managing, disasters in Papua New Guinea. Following the Tumbi landslide, the NDC sent a Technical Assessment Team to the affected area. Part of their mandate was to investigate the cause of the landslide.

Despite the allegations made against EHL, the NDC team elected to work *with* EHL staff when conducting their investigation. According to Reuters reporter Rebekah Kebede (2012) "during the National Disaster Centre's initial report into the disaster, Exxon provided logistics, transport and accommodation for the government team". In light of the credible accusations which had been made by local landowners and the NDC's own staff, collaboration between EHL and the NDC was at best inappropriate, and in all likelihood compromised the independence of the investigative team both in reality, and



in the eyes of the victims' family.

Based on their investigation, the NDC Technical Assessment Team compiled a report on the landslide, which was published on 26 January 2012. The report declared: "Given the absence of a seismic trigger, it can be concluded, that the landslide was caused by continuously heavy rainfall weakening the limestone formation causing subsidence" (NDC 2012: 2). The report gave *no consideration* to the quarry's role in the landslide. This was particularly surprising in light of the allegations made by local landowners, and Bill Yomba from the NDC.

The NDC's findings were evaluated by Professor David Petley, an international landslide expert. In a blog published by the

American Geophysical Union, Petley (2012) made the following observations:

- "Clearly at least a part of the quarry was lost in the landslide, so a proper discussion of whether the quarry played a role in activating these weaknesses seems essential to me".
- "The landslide trigger is definitively described as being rainfall, on the basis that there was no recorded seismicity. However, although 'continuous heavy rainfall' is described, there is no data to support this, and no eye-witness reports. The next sentence talks about 'abnormally high rainfall', but I can find no other reference to this event. I wonder what evidence there is for this



abnormal rainfall event, given the high rainfall that this area is likely to receive anyway”.

- “...the report notes that the initial assessment team ‘saw clear evidence of liquefaction of the rock formation’. This is most surprising. Limestone is not a material that undergoes liquefaction – I have never heard of such a mechanism in any hard (as defined from an engineering behaviour perspective) rock – and so I just cannot understand this purported process”.

As a result, Petley (2012) concludes, “to my mind this report should not be considered to be the definitive analysis of this landslide. Much more detailed analysis is needed, and lessons need to be learnt in terms of other slopes in Papua New Guinea”

Facing increased scrutiny by the media, NGOs, scholars and bloggers, the NDC’s Martin Pat (Provincial Disaster Coordinator) admitted that “we [NDC] have yet to establish the actual cause, what actually caused this slide” (ABC Radio, 10/2/2012). Despite this admission, the NDC’s Acting Director, Martin Mose, later informed Reuters that the government had no plans to investigate the cause of the landslide, a message which contradicted earlier promises made by Papua New Guinea’s Prime Minister (Kebede 2012).

### **Allegations of Neglect, Threats, and Bribery**

In the landslide’s immediate aftermath, families were forced to dig by hand for their loved ones. The NDC allegedly focused resources on reopening an important arterial

road blocked by the landslide. This road was essential to the construction work being undertaken by PNG LNG contractors in the area.

As a result of the NDC’s priorities, displaced people from the area complained that apart from food and temporary shelter given to the victims’ families by EHL during road construction work, they received no humanitarian assistance. Local resident Eva Agobe observes, “no-one came, but only the Red Cross came. They just came and observed what had happened there, just to see and check. They didn’t help anymore, just to observe” (Interview with journalist Catherine Wilson, 16 March 2012).

The problematic humanitarian conditions were exacerbated by the mass migration of grieving relatives to the area. One resident claims, “our living conditions are overcrowded and very poor. More than 3,000 people are living together in a temporary shelter, the families of the landowners, relatives of the deceased from other parts of PNG and LNG workers from outside. The two sources of water have been affected and there is no sanitation. We are not getting food rations now. Our villages have been affected, so we have no land” (Interview with journalist Catherine Wilson, 28 February 2012).

To alleviate the situation the Prime Minister of Papua New Guinea had promised on 1 February 2012 to provide K10 million in aid (Nicholas 2012). Despite the Prime Minister’s promise, humanitarian assistance was extremely slow to arrive. With tensions rising, on or around the 8 February, relatives of the deceased elected to disrupt repair work on the road. The relatives demanded that the

government distribute aid and implement an independent investigation, before any further work on the blocked road could take place.

On or around 11 February, representatives from the NDC met with local villagers. The NDC was allegedly accompanied by the local Mobile Squad Commander and several Papua New Guinea Defense Force officers. The Mobile Squads – a paramilitary policing unit with a history of serious human rights abuses (Amnesty International 2009; Human Rights Watch 2005 & 2006; Lasslett 2010) – had been providing security for PNG LNG installations in the area, and had been at the landslide site since 24 January 2012 (In late January one landowners, Hibson Puma, had complained to LNG Watch (2012): "We are not at war! We need clean water, garden food, shelter and comfort. We do not need to see high powered guns [of the mobile squads] in this type of situation"). It is alleged by community activists in the area that the Mobile Squads have been harassing those who speak out against PNG LNG (Personal Communication, 22 March 2012).

At the 11 February meeting villagers were allegedly informed by the NDC that if they did not allow repair work to take place, the humanitarian aid offered by the government would not be distributed (Personal Communication, 29 February 2012). Local resident Hibson Puma claims: "The government forced them [villagers] to open the road and the people don't agree with the government and the companies" (Interview with journalist Catherine Wilson, 16 March 2012). It is also alleged by a local resident, that EHL offered relatives of the landslide victims cash payments:

Its Community Affairs officers (CA)

promised to give us K10,000 per day for the clearance of the road, and told us to sign the agreement. The copy of the agreement was held by Peter Buka of Police Mobile Squad 09 of Tari. They told us that if we disturb the road clearance than we will face the full force of the law. (Interview with journalist Catherine Wilson, 28 February 2012; see also RNZI, 1/3/12)

Given their desperate situation, the families evidently agreed to lift the blockade in return for humanitarian assistance and payment by EHL. Repair work resumed; security was provided by Mobile Squad officers and the PNGDF. The Mobile Squads, it should be noted, are logistically supported by EHL (D'Appolonia 2010: 63).

In the end the road was built over the top of the debris – and presumably bodies – and reopened on or around 1 March 2012. Villagers were angered that the road was built over the bodies of loved ones, without having first excavated the victims. Local village Chief Jokoya Piwako claims: "In our culture, when the body is dead under the rock, there should be no-one going in there. We are with the sorrows, but the government and the companies they did not listen to him. They just did the road on top of those bodies. They used force" (Interview with journalist Catherine Wilson, 16 March 2012).

The humanitarian aid earmarked for the displaced arrived a week after the road was reopened. In the end, only K3 million was set aside for the landslide victims. A symbolic cheque was paid to Stanis Talu by the NDC at a formal ceremony held on 8 March, while the actual K3 million fund was given to Chief Jokoya Piwako.

Following custom, the several thousand relatives present at the landslide site treated the K3 million as compensation paid for the killing of their family members by EHL. As a result, Chief Piwako was obliged to distribute the entire fund to aggrieved relatives. Consequently, those displaced have been forced to live in tents, while they find – unaided – land to relocate to. Many homes that escaped damage lie in close proximity to the unstable, landslide area, evidently no effort has been made to relocate those in danger either.

### **A Commission of Inquiry into the Tumbi Landslide: The Way Ahead**

On the 2 March, 2012, Papua New Guinea's Treasurer told Radio New Zealand International "I support that there should be an investigation." (RNZI, 2/3/2012). This reflects the sentiments also expressed by the Prime Minister of Papua New Guinea in the landslide's immediate aftermath (RNZI, 27/1/2012). Nevertheless, to date no arms-length inquiry has taken place. That said, compelling evidence exists to suggest this inquiry should still take occur:

*1. Expert Testimony* - Leading international landslide experts have, on a number of occasions,



raised serious concerns over the role played by the local quarry. In an interview on Radio Australia (30/1/2012), Professor Tim Sullivan – who led the investigation into Australia’s Thredbo disaster – observes, “The fact that there is a quarry very close to the, what appears to be, the top where the landslide started and that that quarry was operating in the recent past, you would think that would be high on your list of potential causes”. Professor Dave Petley – the director of Durham University’s International Landslide Centre – has supported Sullivan’s assessment. In a more recent interview with Reuters Petley explained: “My working hypothesis, which needs to be tested, is that the quarry played a role in increasing the susceptibility of the slope to failure. Rainfall was then the trigger for the final collapse” (Kebede 2012).

*2. The Testimony of the PNG LNG Independent Environmental and Social Consultant* - Analysis by the PNG LNG project’s Independent Environmental and Social Consultant, D’Appolonia, published in 2011, suggests that environmental and safety management at PNG LNG was being placed in danger by overly ambitious construction schedules. In a report dated March 2011, D’Appolonia note construction work in the Komo area continues to be “behind schedule” (D’Appolonia 2011: 8). “The need to accelerate construction performance”, D’Appolonia warn, “could compromise environmental and social management” (*ibid*). To highlight their concerns D’Appolonia cite an example from 2010: “On November 13, 2010 a mudslide occurred at the HGCP site with environmental and social consequences. The failure took place in spoil from the EPC4 top camp placed by CCJV apparently without distributing the

engineering drawing to all responsible parties or without undertaking a thorough assessment of engineering and environmental/social risk” (D’Appolonia 2011: 8). In light of operating conditions at Komo, and past incidents in other PNG LNG project areas, D’Appolonia (2011: 22) concludes: “The overall impression of D’Appolonia is that incidents and situations have developed because the Project has circumvented correct procedures in the interest of schedule...The basic observation is that the Project will need to make sure the schedule does not dominate decisions”. The testimony of D’Appolonia sheds light on a variety of issues which amplify the concerns expressed by the two aforementioned landslide experts.

*3. The Testimony of Landowners* - Landowners in Papua New Guinea possess an intimate understanding of their environment which has been generated over thousands of years, and passed down through the generations. In the case of Tumbi, landowners have suggested both the size and ferocity of the landslide was unprecedented. They have argued that EHL contractors altered local waterways, and destabilised the mountain area through limestone extraction and blasting. This, it is suggested, created the conditions in which heavy rainwater could trigger a major landslide. These claims would appear to support the working hypotheses that have been developed by international landslide experts.

In light then of the testimony provided by international landslide experts, D’Appolonia, and local landowners, there is compelling reasons to launch a Commission of Inquiry into the Tumbi landslide. The terms of reference of this Inquiry should be wide



enough to probe the following important issues:

1. The cause(s) of the Tumbi landslide.
2. The alleged failure of EHL to relocate the villages of Tumbi and Tumbiago prior to the landslide.
3. Allegations of collusion between the NDC and EHL.
4. The NDC's alleged failure to provide adequate humanitarian assistance.
5. The NDC's alleged failure to properly manage the distribution of financial aid .
6. Allegations that local landowners protesting the official landslide response were threatened by national government representatives.
7. Allegations that protesting local landowners were offered undisclosed payments by EHL.
8. The strength of environmental and safety oversight provided by regulatory agencies at PNG LNG sites.

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## About the International State Crime Initiative

The International State Crime Initiative (ISCI) is a multidisciplinary, cross-institutional and international initiative designed to gather, collate, analyse and disseminate research based knowledge about criminal state practices, and resistance to these practices. It administers the international journal *State Crime* and the multi-media online reportage forum, the *State Crime Testimony Project*.

ISCI is institutionally supported by King's College London and partnered with Harvard University, the University of Hull and the University of Ulster. Further information on ISCI and its members can be found at the initiative's website: [www.statecrime.org](http://www.statecrime.org)



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